



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/821,045	04/08/2004	Marc Alan Dickenson	AUS920031077US1	9663
35525	7590	12/15/2006	EXAMINER	
IBM CORP (YA) C/O YEE & ASSOCIATES PC P.O. BOX 802333 DALLAS, TX 75380			BONZO, BRYCE P	
			ART UNIT	PAPER NUMBER
			2113	

DATE MAILED: 12/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/821,045

Applicant(s)

DICKENSON ET AL.

Examiner

Bryce P. Bonzo

Art Unit

2113

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Non-Final Official Action

Status of the Claims

Claims 8-14 and 20-22 are rejected under 35 USC §101.

Claim 7 is rejected under 35 USC §112.

Claims 1-4, 6, 15, 18-22 are rejected under 35 USC §102.

Claims 5, 8-10, 16 and 17 are rejected under 35 USC §103.

Claims 11-14 are objected to while containing allowable subject matter.

Rejections under 35 USC §101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 8-14 and 20-22 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claims encompass transmission type media and programming per se.

Rejections under 35 USC §112

The following is a quotation of the first and second paragraphs of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 7 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. There is not "an order" provided in the written description.

Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Antecedent basis is not provided for "the order." While applicant may argue order is inherent to any operation, it not clear to what the order is referring. Order, when performing writing, can describe both the temporal sequence of writes or the addressing of locations during a write. As such this claim has not been examined.

Rejections under 35 USC §102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

- A person shall be entitled to a patent unless –
 - (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 6, 15, 18-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Lautenbach-Lampe (United States Patent No. 6,279,120 B1).

As per the claims:

1. A method of generating a data dump in a data processing system, the method comprising the computer implemented steps of:

initializing a system boot of the data processing system (column 4, lines 5-21);

executing a firmware that includes first failure data capture logic (column 4, lines 5-21);

creating a data dump in a persistent storage of the data processing system (column 4, lines 50-52); and

attempting the complete the system boot of the data processing system (column 6, lines 15-18).

2. The method of claim 1, further comprising: restarting an operating system kernel responsive to creating the data dump (column 4, lines 18-21).

3. The method of claim 1, further comprising: detecting a fault condition of the data processing system (column 3, lines 43 through column 4, lines 21);

and determining that the data processing system is not in a recoverable state (inherent as rebooting is a the result of the operations at column 1, lines 6-44).

4. The method of claim 1, wherein executing a firmware further includes executing first failure data collection logic responsive to initializing the system boot (column 4, lines 18-21).

6. The method of claim 1, wherein creating a data dump is performed responsive to determining that a reset type of the data processing system is one of a plurality of boot dump collection reset types (column 3, lines 43 through column 4, line 4).

15. A data processing system for generating a data dump in response to detection of a fault condition, comprising:

a storage device that contains a logic as a set of instructions for generating a data dump (column 4, lines 18-21); and

a processing unit, responsive to execution of the set of instructions, for evaluating a reset type of the data processing system (column 3, lines 43 through column 4, lines 36) and, responsive to evaluating the reset type, generating a dump during a boot of the data processing system (column 4 in its entirety).

18. The data processing system of claim 15, wherein execution of the set of instructions is performed responsive to identifying a system fault as one of a plurality of boot dump collection reset types (column 3, lines 43 through column 4, lines 36).

19. The data processing system of claim 15, wherein execution of the set of instructions is performed responsive to determining that a fault condition detected in the data processing system is not recoverable (column 1, line 43 through column 2, line 42).

Art Unit: 2113

20. A computer program product in a computer readable medium for generating a data dump in a data processing system, the computer program product comprising:

first instructions for collecting first failure data capture information when the data processing system experiences a recoverable error (column 4, lines 50-56);

second instructions for collecting first failure data capture information when a service processor remains in a serviceable state after the data processing system experiences an unrecoverable error (column 4, lines 5-21); and

third instructions implemented as firmware for collecting first failure data capture information during boot of a service processor when the data processing system experiences an unrecoverable error (column 4, lines 5-21).

21. The computer program product of claim 20, further comprising: fourth instructions that evaluate a system error as one of a plurality of reset types (see Figure 1).

22. The computer program product of claim 21, wherein the plurality of reset types include a unit check reset, a kernel panic reset, and a host initiated reset (column 3, lines 43 through column 4, line 4).

Rejections under 35 USC §103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 2113

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5, 8-10, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lautenbach-Lampe (United States Patent No. 6,279,120 B1).

Lautenbach-Lampe does not explicitly disclose:

wherein creating a data dump is performed responsive to determining that a valid data dump does not exist in the persistent storage.

Official Notice is given that in the computer arts, it is notoriously well known to create a file when a needed file does not exist. In computer systems, memory must be portioned so that it may be later accessed. With out this allocation, and creating of files when they do not already exist, no new data can be stored in a manner in which it can be found again. Thus it would have been obvious to one of ordinary skill in the art of computer design to explicitly provide for the creating of dump files in Lautenbach-Lampe in order allow the saving of dump data to allow for later debugging.

As per claim 8, Lautenbach-Lampe does discloses:

A computer program product in a computer readable medium for generating a data dump in a data processing system, the computer program product comprising:

first instructions for evaluating a reset type of the data processing system (column 3, lines 43-column 4, line 21);

third instructions, responsive to determining that a valid data dump is not maintained by the data processing system, for executing first failure data capture logic during a boot of the data processing system (column 4, lines 5-21).

Lautenbach-Lampe does not explicitly disclose:

second instructions for determining whether a valid data dump is maintained by the data processing system.

Official Notice is given that it is notoriously well known in the computer arts to determine if a valid file exists prior to generation of the same file. In computer systems, memory must be portioned so that it may be later accessed. With out this allocation, and creating of files when they do not already exist, no new data can be stored in a manner in which it can be found again. Furthermore, allocation of space for something that already exists is an inefficient memory usage, and often leads to memory leakage. Thus it would have been obvious to one of ordinary skill in the art of computer design to explicitly provide for the determining if a valid dump file exists in Lautenbach-Lampe in order allow the efficient storage of dump information.

As per claim 9, Lautenbach-Lampe does not explicitly disclose:

wherein the third instructions evaluate a capacity of a persistent storage.

Lautenbach-Lampe does disclose the need to check for the suitability of persistent storage (column 7, lines 12-16). Official Notice is given that it is notoriously

Art Unit: 2113

well known the check the storage capacity of a storage device prior to transmitting data to the device. The capacity of storage often is determined to prevent a storage failure caused by attempting to save more data than the storage device has available memory. Lautenbach-Lampe has already stated that checking of the device to make sure it operational is desirable, and as such has clearly approached the topic of storage devices not being in an ideal state for storage. Thus it would have been obvious to one of ordinary skill in the art at the time of invention implement the practice the well known procedure to determine available storage capacity prior to transfer in the system of Lautenbach-Lampe thus creating am more robust system.

As per claim 16, Lautenbach-Lampe does not explicitly disclose:

wherein the storage device is a flash memory, and the dump is written to the flash memory.

Official Notice is given that it is notoriously well known to store system dump information to flash memory devices. Flash offers the well known benefits of small physical size, high access speeds and non-volatile properties that are essential memory dumping. Thus it would have been obvious to one of ordinary skill in that art at the time of invention to implement the disk drive storage of Lautenbach-Lampe as a flash memory thus allowing small and faster access times for the large amounts of data needed to be transferred from system memory for later diagnostic use.

Art Unit: 2113

As per claim 17, Lautenbach-Lampe does not explicitly disclose:

wherein the storage device is disposed on a subsystem module that is removable from the data processing system.

Lautenbach-Lampe does disclose the use of both disk drives (which while not inherently removable from computer systems, generally are removable) and transmission of the dump file off the computer system via communication channels. Official Notice is given that it is notoriously well known to use removable flash memory in system where data needs to be removed for later use or use at a separate location. Removable flash memory is often used to move data from devices which are unable to handle processing either by design or fault, such as moving the large amount of data out of a digital camera. Thus it would have been obvious to one of ordinary skill in the art at the time of invention to implement the data transfer out of the processing system of Lautenbach-Lampe via removable flash as opposed disk drive or transmission media, creating a smaller or more secure transfer mechanism.

Allowable Subject Matter

Claims 10-14 contain matter which over comes the presented prior art, when viewed as a whole in view of their parents claims. Applicant is further reminded that while these claims may over come the prior art, other forms of rejection are pending.

Art Unit: 2113

Claims 10 and 11 contain the limitations which detail the entering of the dump data into the dump file based on priority.

Claims 12-14 describe the evaluation of the priority item in a list, and using that evaluation in the writing of the dump file.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bryce P. Bonzo whose telephone number is (571)272-3655. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Beausoliel can be reached on (571)272-3645. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


BRYCE P. BONZO
PRIMARY EXAMINER

Art Unit: 2113

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Bryce P. Bonzo
Primary Examiner
Art Unit 2113